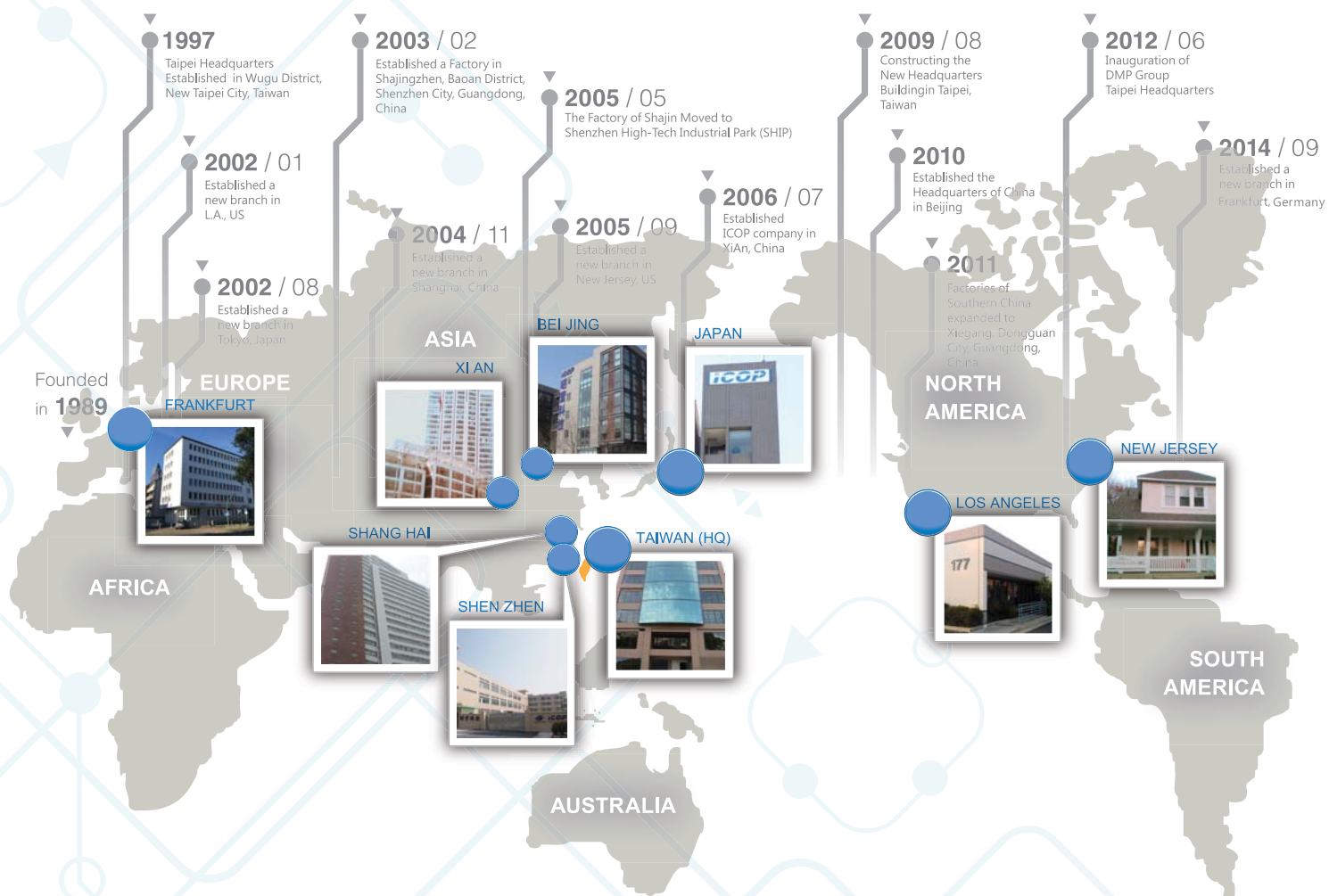




To emBEdded OR NOT TO emBEdded



Beyond Limitation of Embedded PC Design



ICOP Technology, established in 1997, focuses on small form factor embedded computers/controllers, industrial panel PCs. ICOP serves an international customer base through a global network of integration and distribution partners.



Products

Modules



- ETX
- ComExpress
- Qseven
- SMARC
- SOM-304/200/128

SBC



- PC/104
- 3.5 inch
- 2.5"/Tiny
- ISA Half-size

PPC



- 4.3"
- 5.7"
- 9"
- 10.4"
- 15"

ICE



Flash Disk



Key Feature

-40 to 85°C

10 years life cycle

I/O Expandable

Legacy OS Support

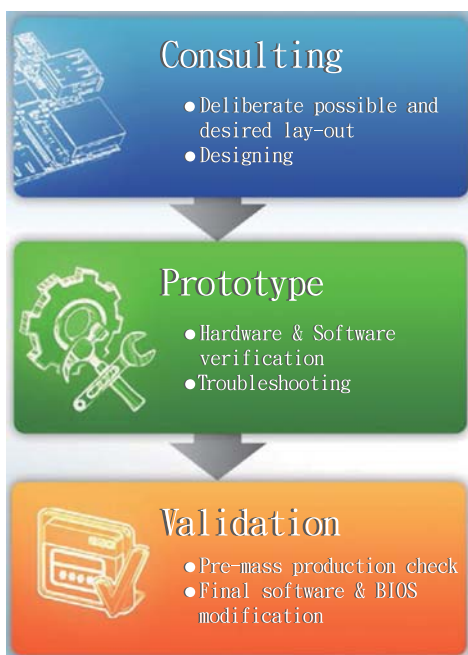
Fanless

EtherCAT Ready

- SOM
- Panel PC

- Windows -Linux
- VxWorks -QNX -RTOS

ODM Series x86 Legacy Solution Provider



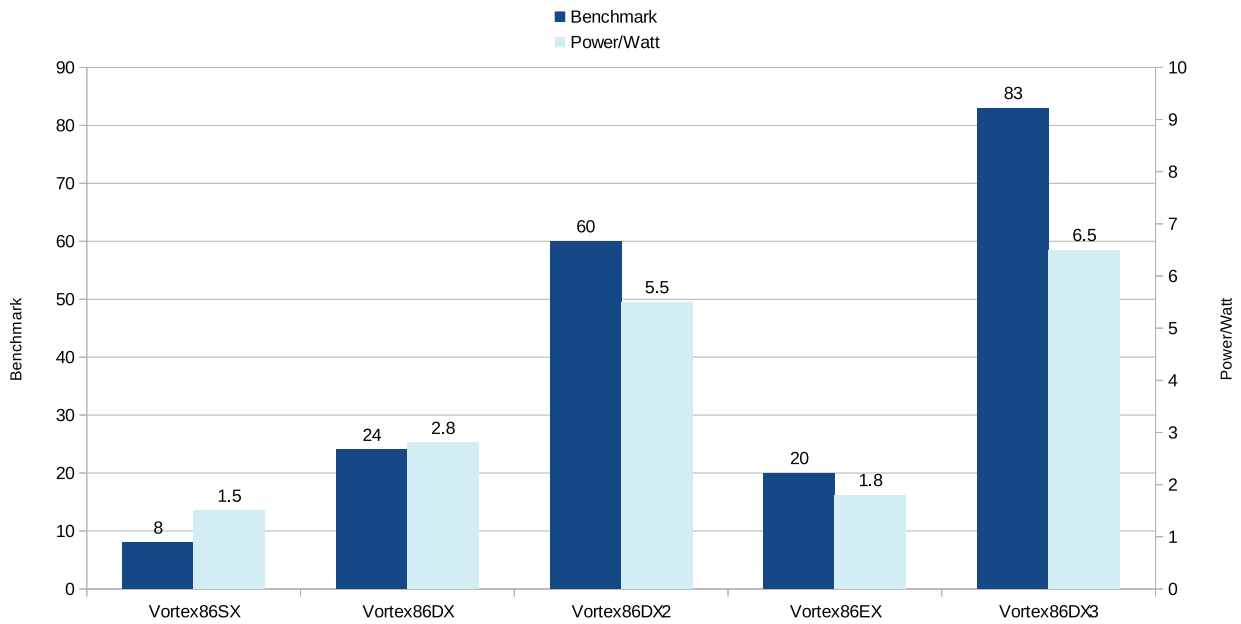
With more than 18 years on designing x86 CPU systems, ICOP owns the valuable know-how and advantage in ODM service. We provide the ODM service for CPU boards, carrier boards for SOM, Panel PC and BOX PC.

Our Promise

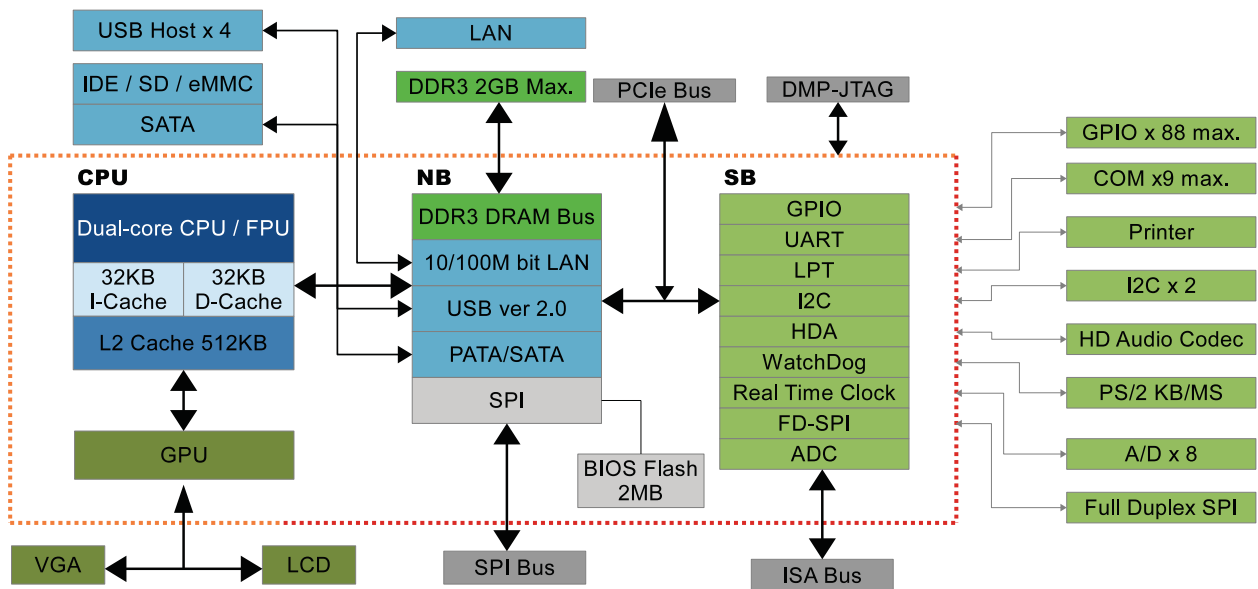
- Affordable Custom Hardware and Firmware Designs
- No Existing Software Changes Necessary
- Function Compatibility for No Compromises
- Extreme Product Versatility to Fit Future or Existing Projects
- Product Life Cycle Guarantee of 10 years

Benchmark & Power Consumption Index

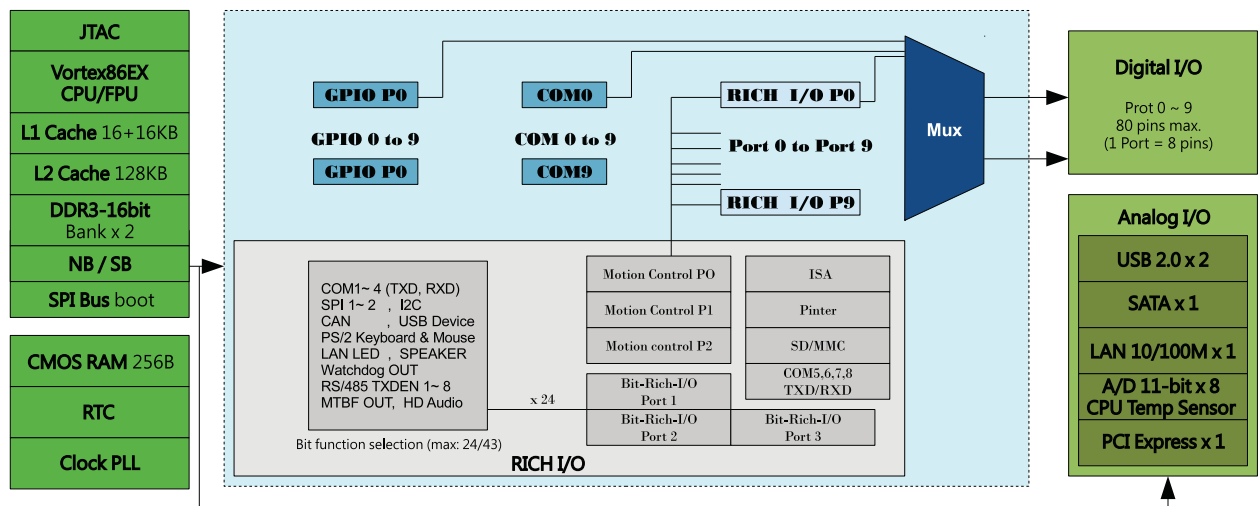
Most of ICOP's products are based Vortex86 series x86 CPU, below is the benchmark/power index.



Vortex86DX3 Block Diagram



Vortex86EX Block Diagram



ETX

Vortex86DX3 SoC

1GB/2GB DDR3

PCI

ISA

USB x4

HD Audio

LVDS

VGA



SATA

IDE

COM x2

PS/2

I²C

LAN

GbE

WDT x2



*Power requirement: Single Voltage +5V@ 1.2A

114 X 95mm

PART NO.	CPU (MHz)	DRAM (DDR3)	VGA/ LVDS	ISA/LAN/ Audio	SATA	P_IDE/ S_IDE	LPT	FDD	PCI	USB	COM	I ² C
VDX3-ETX-53IE	800	512MB	Yes	Yes	V	1/0	N/A	N/A	Yes	4	2	1
VDX3-ETX-74IE	1000	1GB	Yes	Yes	V	1/0	N/A	N/A	Yes	4	2	1
VDX3-ETX-74LE	1000	1GB	Yes	Yes	V	N/A	1	N/A	Yes	4	2	1
VDX3-ETX-74IE-H	1000	1GB	Yes	Yes	H	1/0	N/A	N/A	Yes	4	2	1
VDX3-ETX-74NE	1000	1GB	Yes	Yes	V	1/0	N/A	N/A	N/A	4	2	1

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

Qseven

Vortex86DX3 SoC

1GB/2GB DDR3

PCIe

USB x8

HD Audio

LVDS

VGA

SATA



SD/eMMC

GPIO

PS/2

RS-232 x1

I²C

SPI

GbE

WDT x2



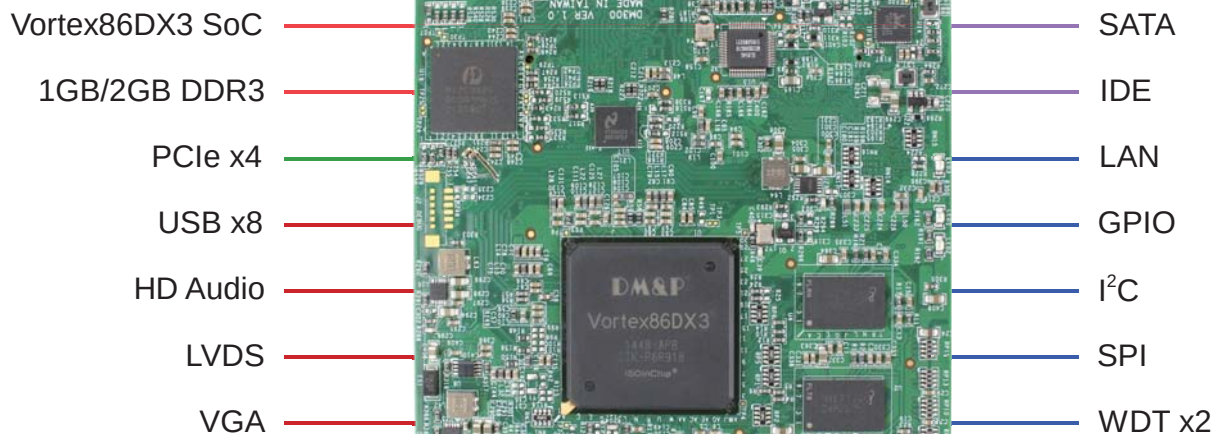
*Power requirement: Single Voltage +5V

70 X 70mm

PART NO.	CPU (MHz)	DRAM (DDR3)	USB 2.0/ USB 3.0	RS-232/ GbE	VGA/ LVDS	Audio	GPIO	SPI/ I ² C	SD/ eMMC	LPC/SMB/ CANBus	SATA
VDX3-Q7-53S	800	512MB	8/0	1/1	Yes	Yes	8-bit	1/1	1/0	N/A	1
VDX3-Q7-74E	1000	1GB	8/0	1/1	Yes	Yes	8-bit	1/1	1/0	N/A	1
VDX3-Q7-75E	1000	1GB	8/0	1/1	Yes	Yes	8-bit	1/1	1/0	N/A	1

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

COMe Compact Type 2



*Power requirement: Single Voltage +5V

95 X 95mm



PART NO.	CPU (MHz)	DRAM (DDR3)	VGA	LVDS	USB	LAN	AUDIO	SATA	IDE	I ² C	GPIO	PCIe
VDX3-COMe-53IE	800	512MB	Yes	Yes	8	1	Yes	1	1	1	8-bit	4
VDX3-COMe-74IE	1000	1GB	Yes	Yes	8	1	Yes	1	1	1	8-bit	4
VDX3-COMe-75IE	1000	2GB	Yes	Yes	8	1	Yes	1	1	1	8-bit	4

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

SMARC



*Power requirement: Single Voltage +5V

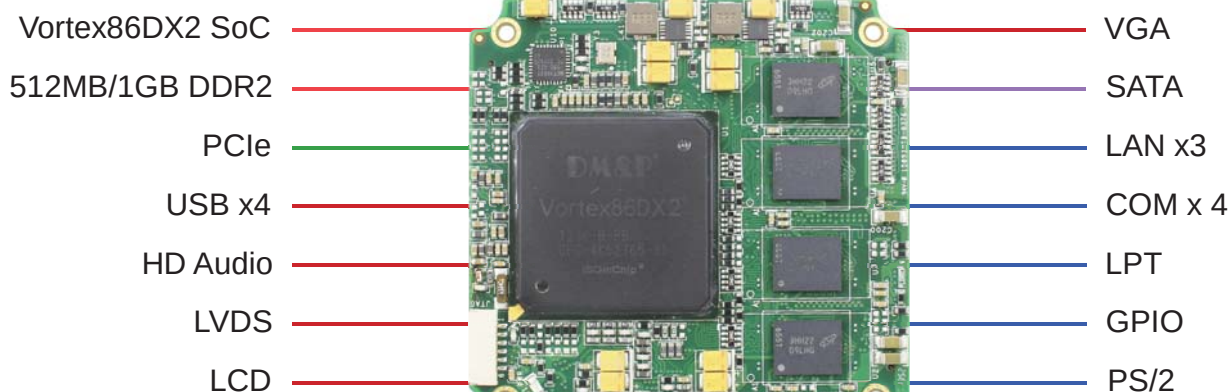
82 X 80mm



PART NO.	CPU (MHz)	DRAM (DDR3)	USB	COM	VGA/LVDS/ LCD/HDMI	AUDIO	GPIO	SD/ eMMC	SATA	GbE	SPI/ I ² C	PCIe
VDX3-SMARC-53S	800	512MB	2	1	Yes	Yes	12-bit	Yes	1	1	1/1	2
VDX3-SMARC-74E	1000	1GB	2	1	Yes	Yes	12-bit	Yes	1	1	1/1	2
VDX3-SMARC-75E	1000	2GB	2	1	Yes	Yes	12-bit	Yes	1	1	1/1	2

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

SOM304

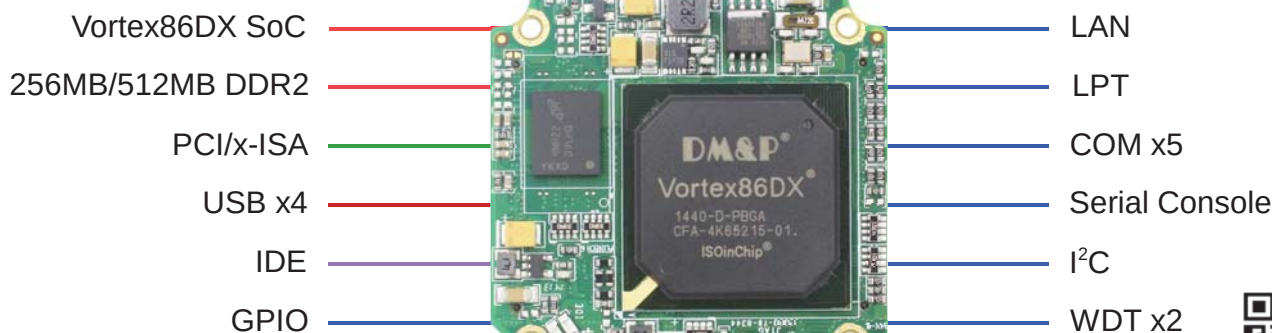


*Power requirement: Single Voltage +5V 70 X 70mm

PART NO.	CPU (MHz)	DRAM	COM	USB	SATA	IDE	VGA/LCD	LAN	PCIe	ISA	GPIO
SOM304D374EINE1	1000	1GB DDR3	4	4	Yes	N/A	1/1	1	1	1	32-bit
SOM304D254EINE1-HS	800	1GB DDR2	4	4	Yes	N/A	1/1	1	1	1	32-bit
SOM304RD52VINE1	800	256MB DDR2	5	4	N/A	Yes	1/1	1	N/A	1	32-bit

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

SOM200



*Power requirement: Single Voltage +5V 52 X 52mm

PART NO.	CPU (MHz)	DRAM (DDR2)	USB	COM	LAN	PCI	x-ISA	IDE	GPIO	LAN	I²C	Serial Console	LPT
SOM200RD52PCNE1	800	256MB	5	4	1	Yes	N/A	Yes	32-bit	1	1	1	1
SOM200SX31XINE1	300	128MB	4	5	1	N/A	Yes	Yes	32-bit	1	1	1	N/A

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

SOM Dev Kit



SOM200EX

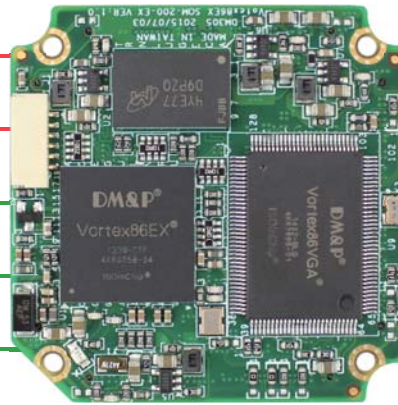
Vortex86EX SoC

512MB DDR3

USB x2

VGA

LCD



SATA

LAN

COM x1

80 pins programmable

11-bit ADC x8

*Power requirement: Single Voltage +5V

*Dimensions: 52 X 52mm



PART NO.	CPU (MHz)	DRAM (DDR3)	COM	USB	SATA	VGA	LCD	LAN	11-bit ADC	I/O pins programmable
SOM200EX	400	512MB	1	2	Yes	1	1	1	8	80

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VEX-SOM

Vortex86EX SoC

128MB DDR3

PCIe

USB x2

SATA



LAN

11-bit ADC x8

80 pins programmable

Onboard SPI flash disk

COM x1

*Power requirement: Single Voltage +5V @ 380mA

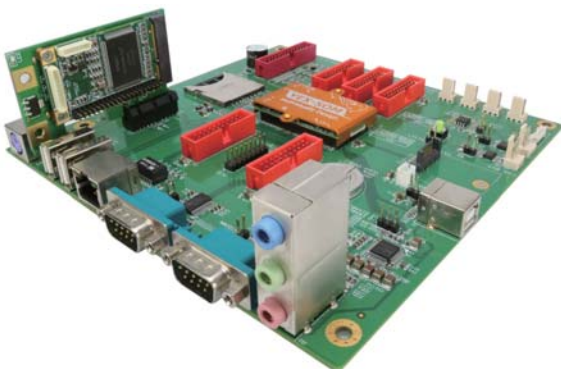
*Dimensions: 45 X 28 X 7mm



PART NO.	CPU (MHz)	DRAM (DDR3)	COM	USB	SATA	PCIe	Onboard SPI Flash disk	LAN	11-bit ADC	I/O pins programmable
SOM200EX	400	128MB	1	2	Yes	1	7.5MB	1	8	80

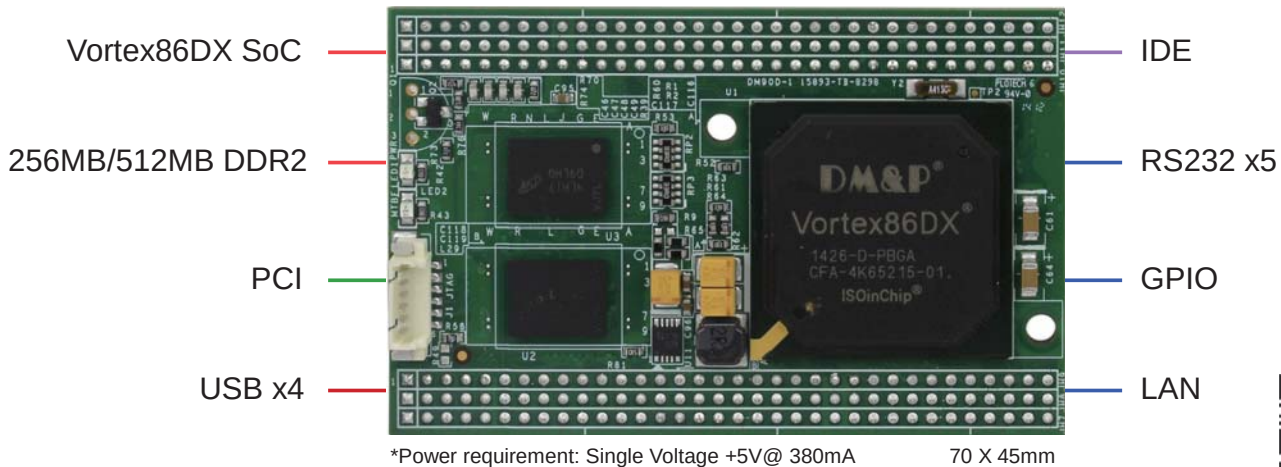
*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VEX-SOM Dev Kit



VEX-SOM + VEX-SOM Development Board + MINIPCIE9160 + 5.7" LCD

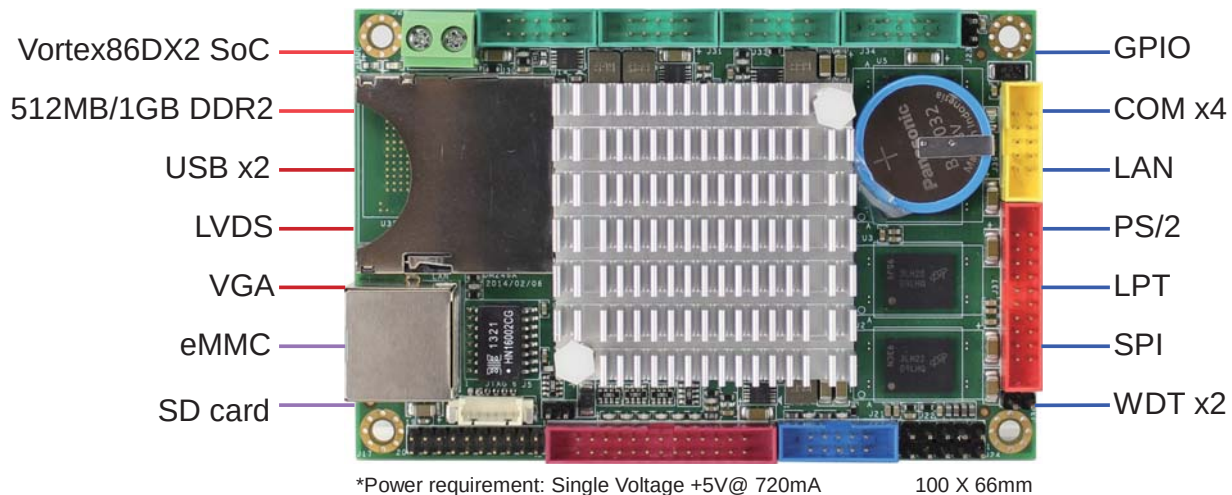
VDX-DIP-PCIRD



PART NO.	CPU (MHz)	DRAM (DDR2)	BUS	COM	USB	LAN	GPIO	IDE	CF	Onboard Disk	LPT
VDX-DIP-ISARD	800	256MB	ISA	5	4	1	32-bit	1	N/A	N/A	N/A
VDX-6300RD	800	256MB	N/A	4	3	1	N/A	N/A	1	N/A	N/A
VDX-6317RD-X	800	256MB	x-ISA	1	1	1	16-bit	1	N/A	N/A	N/A
VDX-6319RD-FB-D	800	256MB	x-ISA	2	1	N/A	16-bit	N/A	N/A	512MB	1

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VDX2-6518



PART NO.	CPU (MHz)	DRAM (DDR2)	BUS	COM	USB	VGA	TTL	LVDS	LAN/ LPT	GPIO	Audio	IDE
VDX-6318RD	800	256/512MB	N/A	4	4	Yes	Yes	N/A	1/0	32	Yes	Yes
VDX-6316RD	800	256/512MB	x-ISA	2	2	N/A	N/A	N/A	0/1	32	N/A	Yes
VDX-6315RD	800	256/512MB	x-ISA	4	2	N/A	N/A	N/A	1/1	32	N/A	Yes
VDX-6314RD	800	256/512MB	x-ISA	4	2	Yes	N/A	Yes	1/0	16	Yes	Yes

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VDX3-6754



*Power requirement: Single Voltage +5V@ 1.3A 90 X 96mm

PART NO.	CPU (MHz)	DRAM	BUS	COM/ USB	Display	LAN/ LPT	GPIO	Storage	CAN	I ² C
VDX3-6755	1000	1GB/2GB	PC/104	3/2	VGA, LVDS	2/0	N/A	SATA	Opt.	N/A
VDX2-6554	800	512MB/1GB	PC/104	4/2	VGA, LVDS, TTL	1/1	16-bit	SATA	N/A	N/A
NAD11-103-SD	500	256MB	PC/104	4/4	VGA, LVDS, TTL	1/0	16-bit	SD	N/A	1
VDX-6353RD	800	256/512MB	PC/104	4/2	VGA, LVDS, TTL	1/1	16-bit	IDE, CF	N/A	N/A

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VEX-6254

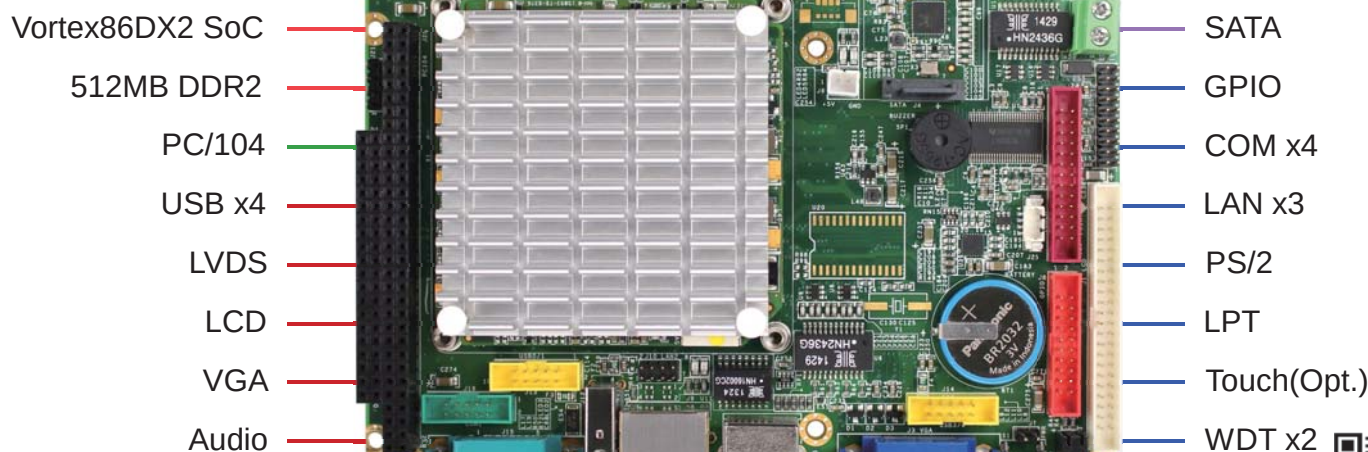


*Power requirement: Single Voltage +5V@ 400mA 90 X 96mm

PART NO.	CPU (MHz)	DRAM (DDR3)	BUS	COM/ USB	Display	LAN	Storage	ADC	SIM card
VEX-6253	400	128MB	X-ISA, Mini PCI-E	1/2	N/A	1	SATA	1	N/A
VEX-6253-3GE	400	128MB	X-ISA, Mini PCI-E	1/2	N/A	1	SATA, eMMC	1	1
VEX-6253-5S-S	400	128MB	x-ISA	5/2	N/A	1	SATA, SD	1	N/A
VEX-6252	400	128MB	Mini PCI-E	8/2	N/A	1	SATA, SD / eMMC	N/A	N/A

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VDX2-6526



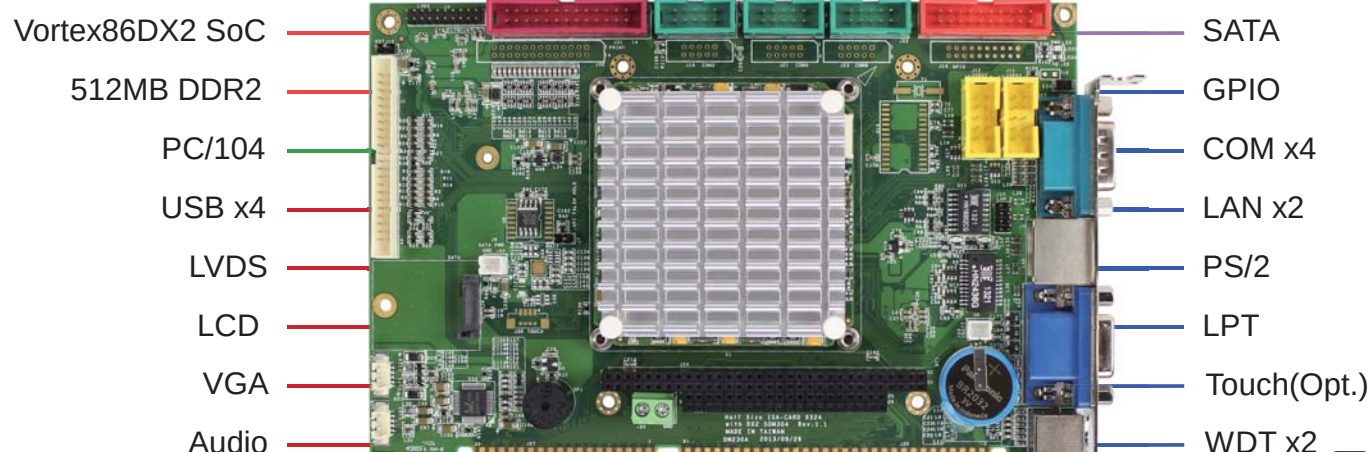
*Power requirement: Single Voltage +5V@ 1000mA

102 X 144mm

PART NO.	CPU (MHz)	DRAM (DDR2)	BUS	COM	USB	Display	LAN	GPIO	Storage	LPT	Aduio
VDX2-6526-1G	800	1GB	PC/104	4	4	VGA, LVDS, TTL	3	16-bit	SATA	1	Yes
VMXP-6426	800	512MB/1GB	N/A	3	4	VGA, LVDS, TTL	3	16-bit	IDE	1	Yes
VDX-6328RD	800	256/512MB	PCI/104+	6	3	VGA, LVDS, TTL	1	16-bit	IDE, CF	1	Yes

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

VDX2-6524



*Power requirement: Single Voltage +5V@ 1000mA

184 X 122mm

PART NO.	CPU (MHz)	DRAM (DDR2)	BUS	COM	USB	Display	LAN	GPIO	Storage	LPT	Aduio
VDX2-6524-1G	800	1GB	PC/104	4	4	VGA, LVDS, TTL	2	16-bit	SATA	1	Yes
VDX2-6524-CF-512	800	512MB	PC/104	4	4	VGA, LVDS, TTL	2	N/A	SATA, CF	N/A	Yes
VDX-6324RD	800	256/512MB	PC/104	4	4	VGA, TTL	1	16-bit	IDE, CF	1	Opt.
VSX-6124-V2	800	128/256MB	PC/104	4	4	VGA, TTL	1	16-bit	IDE	1	N/A

*Operating Temp.: -20°C ~ +70°C, -40°C ~ +85°C (Optional)

PPC Series



Model Name		PMX-057T	PMX-090T	PPC-090T	PPC-104T	PPC-150T
LCD Display	Size	5.7"	9"	9"	10.4"	15"
	Resolutions (Pixel)	640x480	1024x600	1024x600	800x600	1024x768
	Size	262,144	262,144	262,144	262,144	262,144
CPU		Vortex86MX+ 933MHz		Vortex86DX2 933MHz		
Memory		512MB / 1GB DDR2 onboard		512MB / 1GB / 2GB DDR2 onboard		
Watchdog Timer		Software Programmable from 30.5μ to 512 Seconds x 2 Sets				
Serial Port		RS-232/422/485 x 1		RS-232/422/485 x 2		
USB Ports		USB Ports (Ver. 2.0) x 2		USB Ports (Ver. 2.0) x 3		
Ethernet		Integrated 10/100Mbps Ethernet		Integrated 10/100Mbps Ethernet / Giga Ethernet		
Internal Drives		Compact Flash Type I/II Slot, Micro SD Slot		Compact Flash Type I/II Slot / SD Slot, SATA		
Expansion I/O Ports Support (Custom I/O Ports Design Available)		No		Yes		
Power Requirement		+5VDC / +8~+35VDC		+12VDC / +24VDC		
Power Consumption (Max.)		7.5 W		24 W		
Operating Temperature		0~+50°C		0~+50°C / -20°C~+60°C		
Storage Temperature		-10~+60°C		-30~+80°C (+86~+176°F)		
Operating System		DOS, Linux, Windows CE, Windows Embedded Standard (XPE / WES2009)		DOS, Linux, Windows CE, Windows Embedded Standard (XPE / WES2009 / WES7)		
Certifications		CE, FCC, VCCI, Vibration	CE, FCC, VCCI, TÜV, Vibration, Shock, IP65 Front Panel	CE, FCC, VCCI, Vibration, Shock, IP65 Front Panel		



For more information, please scan QR code

HMI-043 T Series



Hardware Specifications:			Power Requirement	+7 ~ 24VDC
LCD Display	Size	4.3" WQVGA TFT LCD	Operating System	DOS, Linux, Windows CE
	Resolutions	480 x 272	Certifications	CE / FCC / VCCI / Vibration Shock / IP65 (Front Panel)
	Colors	16.7M		
	View Angle	Vertical 120°, Horizontal 140°	Operating Temperature	0°C ~ +50°C / -20°C ~ +60°C
	Brightness	280 cd/m2	Storage Temperature	-30°C ~ +70°C
	Backlight life	20,000 hrs	Dimensions	W 116.4 x H 94.4 x D 34.3 mm
	Contrast Ratio	500:1	Weight	300g
CPU		DM&P SoC Vortex86EXm 400MHz	Ordering Information:	
Cache		L1: I/D-Cache 16/16KB, L2:128KB		
System Memory		128MB / 256MB DDR3 Onboard	HMI-043T-EM41N-B01	4.3" HMI w/128MB/USB/SD/RS232/485/DC7-24V
Serial Port		RS-232/485/CAN Bus x 1 (Optional)	HMI-043T-EM41N-B02	4.3" HMI w/128MB/USB/SD/POE/RS232/485/DC7-24V
USB Port		USB Ports (Ver. 2.0) x 1		
Ethernet		RJ45 10/100Mbps Ethernet, Support PoE/PD (Optional)	HMI-043T-EM41B-B01	4.3" HMI w/128MB/USB/RS232/512MB eMMC/485/DC7-24V
Internal Drives		SD Slot / 512MB or 4GB eMMC (Optional)		
Touch Screen Type		Analog Resistive	HMI-043T-EM41B-B02	4.3" HMI w/128MB/USB/RS232/512MB eMMC/POE/485/DC7-24V
HF RFID		Support (Optional)		

HMI-043T Open Frame



Hardware Specifications:		View Angle	Vertical 120°, Horizontal 140°
CPU	DM&P SoC Vortex86EXm 400MHz	Touch Screen	4-wire Analog Resistive
Cache	L1: I/D-Cache 16/16KB, L2:128KB	Transmittance	80%
System Memory	128MB / 256MB DDR3 Onboard	Power Requirement	+5VDC@1A
NAND-FLASH	512MB / 2GB / 4GB (Optional)	Operating Temperature	-20℃ ~ +60℃
Ethernet	Integrated 10/100Mbps Ethernet	Storage Temperature	-30℃ ~ +70℃
Audio	HD Audio-Realtek ALC262 Codec Min-in x 1 / SPK-L, SPK-R Connector x 1	Operating Humidity	0%~90% Relative Humidity, Non-Condensing
Serial Interface	RS-232 x 1 / RS-485 x 2 / CAN bus x 1	Operating System	DOS, Linux, Windows CE
USB Port	USB Ports (Ver. 2.0) x 2	Dimensions	W 105.5 x H 67.2 x D 13.6mm
Digital I/O	8-bit GPIO x 1	Ordering Information:	
Display	4.3" WQVGA TFT LCD	HMI-043T-EM41N-O	4.3" HMI OP w/128MB/8MBSPI /2U/1S/485/GPIO/SPK/CAN
Backlight Unit	LED		
Resolutions (Pixel)	480 (W) x 272 (H)	HMI-043T-EM41B-O	4.3" HMI OP w/128MB/ 512MBeMMC/8MBSPI/2U/ 1S/485/GPIO/SPK/CAN
Luminance	280 cd/m2		
Contrast Ratio	500:01:00		
Colors	16.7M	CABLE-265OP-SET	HMI-043T Cable Set for Open Frame

Open Frame Series



Model Name		VOX-084-TS	VOX-104-TS	VOX-150-TS	VOX-150L-TS
LCD Display	Type	SVGA	SVGA	XVGA	XVGA
	Size	8.4"	10.4"	15"	15"
	Resolutions	800x600	800x600	1024x768	1024x768
	Colors	262,144	262,144	262,144	262,144
	View Angle (L/R/U/D)	80/80/80/60	80/80/60/80	80/80/70/60	80/80/70/60
	Brightness	250 cd/m2	400 cd/m2	350 cd/m2	250 cd/m2
	Backlight life	30,000	50,000	50,000	25,000
	Contrast Ratio	600:1	700:1	700:1	700:1
CPU		DMP Vortex86 MX+ / DX2			
Cache		L1:16KB I-Cache, 16KB D-Cache L2: 256KB Cache			
Memory		512MB/1GB Memory onboard			
Watchdog Timer		Software Programmable from 30.5u to 512 Seconds x 2 Sets			
Serial Port		RS-232/422/485 x 1, RS-232 x 6			
USB Port		USB Ports (Ver2.0) x 2			
Ethernet		Integrated 10/100Mbps Ethernet			
Audio		HD Audio-Realtek ALC262 CODEC			
Flash Disk Support		Onboard 4MB Flash Disk (Optional) EmbedDisk Module Compact Flash Type I/II (Optional)			
Touch Screen Type		Resistive			
Power Requirement		5VDC, 12VDC	5VDC, 12VDC	5VDC, 12VDC	5VDC, 12VDC
Power Consumption		47W			
Operating Temperature		0 ~ +50 °C			
Dimensions (WxHxD)mm		230.4 x 150 x 29	303 x 204 x 45.5	368 x 278 x 45.5	368 x 278 x 45.5
Operating System		DOS, Linux, Windows CE, Windows Embedded Standard (XPE), Windows 7			



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ICE-SERIES

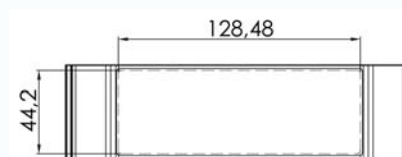
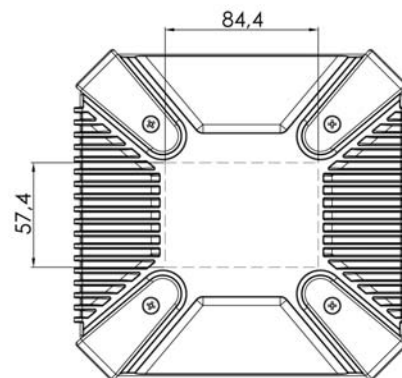


Features

- PC/104 Enclosure system
- Customize I/O Design
- Customize Laser LOGO Design
- Rugged and Stackable metal Design
- IP65 Watereproof Design (Option : IP67)
- Single +5V DC input (Option : AC type)
- Fanless Design

ICE-6754-DC	ICE with VDX3-6754, 1GB, VGA, 2xUSB, LAN, 3xCOM, GPIO
ICE-6354-DC	ICE with VDX-6354, 256MB, VGA, 2xUSB, LAN, 3xCOM, GPIO
ICE-6358-DC	ICE with VDX-6358, 256MB, VGA, 2xUSB, 2xLAN, 2xCOM, GPIO

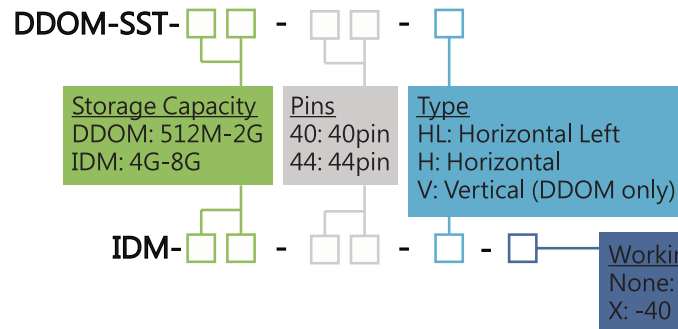
Custom I/O and Laser LOGO Service



EmbedDisk Module & Accessories

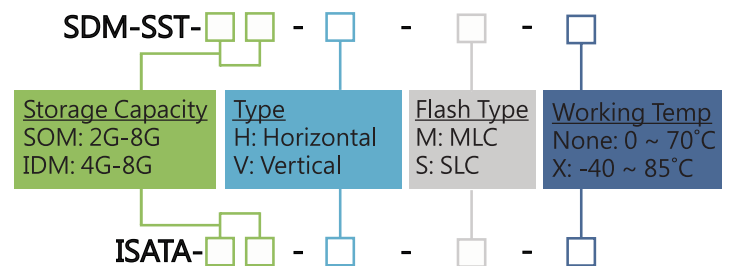
IDE/ATA Series

Part No.
DDOM-SST-512M-44P
DDOM-SST-1G-44P
DDOM-SST-2G-44P
IDM-4G-44P-X
IDM-8G-44P-X



SATA Series

Part No.	
SDM-SST-2G-H-M	ISATA-1G-H-S
SDM-SST-4G-H-M	ISATA-2G-H-S
ISATA-8G-H-M	ISATA-4G-H-S
ISATA-16G-H-M	ISATA-8G-H-S
ISATA-32G-H-M	ISATA-16G-H-S
ISATA-4G-H-M-X	SDM-SST-2G-H-S-X
ISATA-8G-H-M-X	SDM-SST-4G-H-S-X
ISATA-16G-H-M-X	SDM-SST-8G-H-S-X
ISATA-32G-H-M-X	ISATA-16G-H-S-X



Peripheral

ICOP-1800	PC/104 RS-232 Module
PC104-1911-CF	PC/104 Compact Flash to IDE
PC104-1911-MINIPCI	PC/104 + Mini PCI Module
VSX-2812	PC/104+ VGA / LCD / DVI Module
ICOP-0071	PC/104 Power supply DC/DC Module
CF-1915	Compact Flash to IDE interface adapter
SD-1917	IDE to MicroSD Converter(for VDX serial only)
ICOP-0101	PC/104 48Bit DIO Module (w/o cables)
ICOP-0094	IDE Exchanger Kit (44pin IDE x 2, 40pin IDE x 2)
ICOP-0096	Vortex86SX/DX TFT to 18-bit LVDS LCD Panel Converter Kit